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IQA Implementation

Quality Assurance Program Implementation

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QA Implementation Activities

- ◆ Ongoing Communication Initiatives
- ◆ Scientific Research Projects
- ◆ Assessment Program
 - ◆ OQBP QA assessment schedule
 - ◆ Consolidated assessment schedule
 - ◆ Corrective Action Plan tracking
- ◆ Other activities & challenges

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QA Implementation - Communication Initiatives

◆ Ongoing Communication

❖ Weekly OQBP staff meetings

- Ongoing implementation status, schedules, projects, issues, news

❖ Fermilab Today QA related articles

- National QA Day April fools – April '09
- Required IQA Training – January '10
- Lessons Learned Announcement Feature – August '10
- Murphy's Law - September '10
- Root Cause Analysis – October '10
- Lessons Learned "How To" - November '10
- Standard Processes – January '11
- Suspect/Counterfeit Items, S/CI – February '11
- Assessment Program – April '11 . . . more through April '12

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QA Implementation - Communication Initiatives continued

- ◆ Scheduling Meeting – attendance, listening
- ◆ Assurance Council - attendance, briefs as needed
 - ◆ QA implementation
 - ◆ Contractor Assurance
- ◆ ES&H/OQBP taskforce (harmonize FESHM & QA)
- ◆ Ad hoc briefs
- ◆ DOE FSO quarterly briefs since 2007 – next April 11, 2011
 - ◆ QA implementation, status DOE QA CAPs
 - ◆ Contractor Assurance

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QA Implementation - Communication Initiatives continued

- ◆ D/S/C staff meetings & QAR support
 - ❖ QA Manager, QARs, QAEs, D/S/C staff
 - ❖ Mentoring, consulting, assistance with QAR related tasks

- ◆ QARs from each D/S/C active since 10/15/08 & OQBP QA staff
 - ❖ Weekly meetings
 - Implementation issues, lessons learned,
 - Assessments, changes in requirements (H13)
 - Reviews & critiques of new or changed QA documents, QA training
 - Assurance Council updates, D/S/C news etc
 - Status of CAPs

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QA Implementation - Project QA Status

◆ Science / Project QA

- ❖ Director approved project QA PM charge – August '10
 - Future direction to be determined with the head of OPPS
- ❖ Presentation on QA to management & project teams
 - Presented to head of OPPS, AD Research, AD Accelerator
- ❖ Working with PPD QAR on QA Plans (Minerva, MicroBooNe & Mu2e)
 - Developing templates, make available to L1, L2 project managers
 - MicroBooNE Cryogenic Engineering QA Plan module , larger QA template
 - Draft QA in projects presentation for project teams
- ❖ Attending PMGs, WGMs (APUL, DES, LBNE, NoVA, Project X, MicroBooNe & Mu2e)

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Assessment Program Approach

- ◆ FY2010 process based D/S/C & OQBP selected assessments
- ◆ Current OQBP QA program 3 year approach
 - ❖ All organizations & processes to be assessed FY2011-FY2013
 - Against requirements identified in the IQA from DOE O 414.1C
 - Includes Scientific Research Projects in Fermilab Guidelines from ANSI Z1.13 (chosen from alternatives)
 - ❖ Priorities & sequence in the schedule
 - Outstanding CAPS (Inspection & Test)
 - Program Maturity (Records Mgmt, M&TE)
 - V&V
 - Risk
 - Emerging issues take precedence
 - Results of previous assessments

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QA Implementation – Assessments, Schedule

◆ OQBP QA Assessments

- ❖ FY2010 process based D/S/C & OQBP selected – 6 small, 1 large (Power)
- ❖ FY2011-2013 - 3 year approach
 - IQA criteria based, lab-wide
 - Includes scientific research, projects & support
 - Individual & summary roll up reports by criteria
- ❖ FY2014 return to process based D/S/C & OQBP selected assessments
 - Most value to D/S/Cs
 - Most relevant QA criteria

3 Year OQBP Assessment Schedule

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Assessment Program – Fermilab Consolidated 3 Year Schedule

- ◆ Fermilab Consolidated Assessment 3 year schedule
 - ◆ All assessment types FY2010-FY2012
 - Meetings with D/S/C Heads for input, content
 - Categories of assessment types available to track
 - Management Assessments
 - Independent Assessments (OQBP, ES&H, Third-party such as DOE, ISO, etc)
 - Inspections (HPR, Walkthroughs etc)
 - Drills
 - Surveillances
 - Director's Assessments
 - Special Assessments (for cause)
 - . . . Others mentioned in FAM Chapter 2 Appendix
- ◆ 2010 lists complete, maintenance ongoing, coordinating with QARs

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QA Assessment Status

◆ OQBP Assessment Status at a Glance

◆ FY2011 –

- S/CI inspection & test all D/S/Cs Q1, Q2 – individual reports complete, lab-wide roll up summary in progress
- Scientific Tech Publ / editorial review Q1 – report delivered
- EVMS surveillance Q2 – draft report in Fermilab review
- Records management Q2, Q3 – fieldwork in progress
- OQBP V&V for closed assessment CAPs all D/S/Cs Q3
- M&TE all D/S/Cs 2 Large x-cutting Q3, Q4

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QA Assessment Results to Date

◆ OQBP Assessment FY2011 Results at a Glance

- ◆ Inspection & test all D/S/Cs Q1, Q2 – 3 Findings
 - 2 segregation of nonconforming material
 - 1 inspection documentation
- ◆ S/CI – 6 Findings
 - Not fully implemented (awareness, following procedures)
- ◆ 17 Observations with recommendations for improvement
 - Documentation & records, infrastructure, work control, etc

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Science / Project QA Assessment Status

◆ Science / Project QA Assessments & Status

- ❖ Science As-Is baseline - final report delivered
 - AD for Research deciding path forward, gaps, CAPs
 - Program, & Projects (Minerva, MINOS, Muon Accelerator, D0, Lattice QCD)
- ❖ Scientific Publication - final report delivered
 - AD for Research deciding path forward, one CAP
 - 14% of publications assessed non-compliant
- ❖ EVMS NoVA draft report in review at Fermilab
 - Final report to Head OQBP, Head OPMO, EVMS project 04/13/11
 - 8 CARs, 5 CIOs re EVMS & ANSI compliance

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QA Implementation - CAPs

- ◆ Corrective & Preventive Action tracking
 - ❖ DOE 2006 QA assessment
 - ❖ DOE 2009 QA assessment
 - ❖ OQBP led assessments (includes 2009 As-Is)
 - ❖ Ad hoc tracking improvement initiatives (ex: training)

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2009 DOE QA Concerns – CAP Status

- ◆ 4 New CAPs OQ-01/04/2010-01 thru -04
 - ❖ C1 & C2 Terms used in CAPA procedure – OQ-01/04/2010-01 – complete
 - ❖ C3 WSS/FESHM 1070 maintenance roles - OQ-01/04/2010-03 – complete
 - ❖ C6 Documentation of acceptance testing varies - OQ-01/04/2010-04
 - Inspection assessment in progress final results 04/30/2011
 - ❖ C7 & C8 Identify assessment criteria, define terms – OQ-01/04/2010-02
 - C7 FAM Mgmt. Assess. Procedure updated & posted - complete
 - C8 Other FAM updates from 2009 assessment - complete
 - Manual revised to incorporate H13 Clause requirements – complete
 - Independent Assess. Procedure updated & posted – complete
 - Lab-wide review (includes ES&H/OQBP taskforce) by 05/31/2011

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2009 DOE QA Concerns – CAP Status

◆ Existing As-Is CAPs

- ❖ C5 Fermilab Chief Engineer – OQ-05/22/2009-01 – IQA being modified, Integrated into new Office of Program & Project Support (OPPS)
 - OQBP, OPMO, new Office of Integrated Planning (OIP)
 - Planning & support, EVMS, OHAP, Engineering Manual
- ❖ C4 & SC1 (sig. concern) Inconsistent engineering practices, lack of Engineering Manual – OQ-05/22/2009-02 – complete
- ❖ C9 & C10 S/CI roles & disposition – OQ-05/30/2009-06 – complete
 - Other activities
 - Collected training samples, S/CI Tags in inventory
 - FESHM update planned to reference the new tag
 - S/CI assessment along with Inspection & Test – renewed awareness

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2009 DOE QA Concerns – 4 CAPs from 2006 DOE QA assessment

- ❖ Criterion 2 Job specific training ITNAs – OQ-08/10/2009-01 – 09/31/2011
 - Initial system enhancements & testing complete more in progress

- ❖ Criterion 4 Document management – OQ-08/05/2009-01(a, b & c)
 - (a) EDMS (Teamcenter) est. completion 07/31/11
 - (b) CIO IT (Sharepoint) est. completion MM/DD/YY
 - (c) COO (policy, process) est. completion 07/31/11

- ❖ Criterion 4 Records management – OQ-08/05/2009-02 – complete
 - Handbook, procedures, training – complete 01/19/10
 - Lab-wide assessment in progress – summary rollup 07/15/11

- ❖ Criterion 8 Calibration – AD-05/07/2009-03 – MM/DD/YY

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Other QA Activities

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QA Implementation – Other Activities

- ◆ Improved Integration with ES&H Management System
 - ◆ ES&H/OQBP task force (SSOs & QA Mgr)
 - Updating FESHM chapters & QA RCA & CAPA procedures
 - Next Fermilab Assessment Manual (FAM) by 06/30/11
- ◆ Improved S/CI Online Training - tbd
- ◆ New Online Assessment Program Training – in QAR review

Quality Assurance Program Challenges

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QA Implementation – Challenges

- ◆ Software, frESHTRK versus Vector – Reported to CIO -> Sharepoint?
 - ◆ Issue is resources
- ◆ Graded Approach
 - ◆ COO considering alternatives
- ◆ Timely implementation of CAPs from 2006, As-Is, 2009
- ◆ Maintenance of consolidated schedule
- ◆ Aggressive assessment schedule

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QAEs

◆ FSO OQBP Joint Activities

- ❖ Next quarterly IQA brief mid July 2011
- ❖ Next FSO DOE QA assessment Q4 FY2012
 - Logistics, criteria, scope etc
- ❖ Other meetings?

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Questions?

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CA Implementation

Contractor Assurance Implementation Status

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CA Implementation Plan

Action Item Number	Topic Name	Topic Description Number	Topic Description	FY10		FY11														Dates
				Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11			
1	Contract Mapping	1a	Contract mapping of SOW and Appendices/Clauses to DOE Orders and Director's Policies			mid												Aug 10 - mid Oct 10		
		1b	Review initial contract mapping document (1a)			mid	mid									P		mid Oct 10 - mid Nov 10		
		1c	Map 1a, above, to programmatic documents (such as plans, manuals and procedures/implementing documents)								mid					E		Dec 10 - mid Mar 11		
		1d	Create plan to fill gaps, if applicable								mid					E		mid Mar - Apr 11		
2	Management Systems	2a	Identify management systems	Complete												R				
		2b	Decide: -- Management System Ownership -- What documents need to be created to implement the Contractor Assurance System -- Format/content of Programmatic Manuals/Documents							mid								Aug 10 - mid Feb 11		
		2c	Write Prime Contract Change Management Procedure							mid								Sep 10 - mid Feb 11		
		2d	Write Manuals											mid		R		mid Feb - mid July 11		
3	Define New Policy Manual	3a	Agree on: --What is a policy? --Levels of policies?		mid					mid						E		mid Sep 10 - Feb 11		
		3b	Agree on: --What policies Fermilab will have --Ownership						mid							V		mid Oct 10 - mid Feb 11		
		3c	Establish document control protocols for policies --Change management --Format of policies									mid				I		Feb 11 - mid Apr 11		
4	Create New Policy Manual	4	Revise existing policies and write new policies as required											mid		E		Feb - mid July 11		

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CA Implementation Plan

Action Item Number	Topic Name	Topic Description Number	Topic Description	FY10		FY11														Dates
				Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11			
5	Management Review Procedure	5a	Draft Mgmt Review Procedure	mid				mid								W		TBD (Draft on hold)		
		5b	Review & Approve Mgmt Rvw Procedure								mid							Dec 10 - mid Apr 11		
6	Establish Board of Directors role	6	Establish Board of Directors role									mid								
7	Reporting and Metrics	7a	Establish reporting methods to the BoD									mid						Apr 11 - May 11		
		7b	Establish metrics for management systems																	
8	Revise FICAP	8a	Draft FICAP revision								mid	mid						mid Mar 11 - mid Apr 11		
		8b	Review & Approve FICAP									mid		mid				mid Apr 11 - mid Jun 11		
		8c	Formalize worker feedback system (proceduralize)															TBD		
9	Revise Comp Assessment	9	Revise Comprehensive Assessment Manual and schedule to accommodate changes in Contractor Assurance		Manual Complete													TBD		
10	Communicate CAS to Fermilab	10a	Communicate CAS Program															Aug 10 - Aug 11		
		10b	Train Fermilab regarding CAS requirements											mid				mid Mar - Aug 11		
11	Benchmarking	11a	Establish Benchmarking Requirements															Mar 11		
		11b	Write Benchmarking Procedure								mid		mid					mid Mar 11 - mid May 11		
		11c	Implement benchmarking process											mid				mid May 11 - Aug 11		
12	Graded Approach	12a	Determine Graded Approach Methodology (plus test cases)							mid								Oct 10 - mid Jan 11		
		12b	Write Graded Approach Procedure															Feb 11 - March 11		
		12c	Implement Graded Approach Procedure											mid				July 11 start		
13	CAS Description	13a	Determine CAS Description Approach														Nov 10			
		13b	Write CAS Description								mid							Dec 10 - mid Mar 11		

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CA Implementation Plan – Status Overview

- ◆ Many items are late to start or overdue for completion.
 - ❖ Project management representative, COO, is aware.
 - ❖ Proposal for changing the implementation plan change and the approach to be taken were approved.
 - Targeting 04/17/11 for having a new schedule to COO
- ◆ Several items caused resources being applied to other things and the inability to access and work the issues with senior management.

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CA Implementation Plan

◆ Contract Mapping

- ❖ OQBP map contract of SOW and Appendices/Clauses to DOE Orders and Director's Policies
 - Complete
- ❖ D/S/C to map above, to programmatic documents (such as plans, manuals and procedures/implementing documents)
 - Late: in progress
- ❖ Create plan to fill gaps, if applicable
 - Late: awaiting D/S/C mapping

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CA Implementation Plan

◆ Management Systems

◆ Identify management system

- Complete

◆ Decide:

- Management System Ownership
 - Late: awaiting Director Approval
- Format/content of Programmatic Manuals/Documents
 - Late: draft in review
- What documents need to be created to implement the Contractor Assurance System
 - Delayed: will wait until Program Manual format is decided and contract mapping are completed to be finalized

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CA Implementation Plan

◆ Management Systems (Continued)

◆ Write Prime Contract Change Management Procedure

- **Late:** process diagram approved; need to create block diagram and procedure.

◆ Write Manuals

- **Late:** need to review a plan change proposal with COO
- Note - Entire plan will be re-planned. New schedule to be created.

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CA Implementation Plan

◆ Define New Policy Manual

❖ Agree on:

- What is a policy?
 - Complete
- Levels of policies?
 - Complete

❖ Agree on:

- What policies Fermilab will have
 - **Late:** Partial agreement on items proposed by OQBP; OQBP to work with MSOs. Need to complete D/S/C contract mapping to confirm
- Ownership
 - **Late:** Proposal is awaiting completion of D/S/C contract mapping

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CA Implementation Plan

◆ Define New Policy Manual (Continued)

❖ Establish document control protocols for policies

- Change management process
 - Proposal accepted; procedure being written
- Format of policies
 - Proposal accepted; will be included in site Document Control System.

◆ Create New Policy Manual

- ❖ **Late:** Plan changed to have OQBP to work with MSOs or their representatives as of 03/15/11
 - Started with Operations policy; initial draft is in review

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CA Implementation Plan

- ◆ Contractor Assurance System Description
 - ❖ Determine CAS Description Approach –
 - **Complete:** had to be redone based upon FRA Steering Committee input.
 - ❖ Create Document –
 - **Late:** draft being modified after FSO review.
- ◆ Revise Fermilab Contractor Assurance Program document
 - **Late:** partial editing complete; awaiting Contractor Assurance Description to ensure no changes.
 - Final draft is in review with FRA and will be provided to DOE within a few days.

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◆ Management Review Procedure

❖ Draft Management Review Procedure

- Establish Board of Directors (BoD) role
- Reporting and Metrics
 - Establish reporting methods to the BoD
 - Establish metrics for management systems

- ❖ **Late:** initial draft ready for review, but is awaiting Contractor Assurance Description to ensure no changes.

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- ◆ Formalize worker feedback system; create documentation – TBD
 - ❖ Note - Proposal is to perform an As-Is or survey on this topic and then, write the document(s).

- ◆ Consolidated/comprehensive Assessment
 - ❖ See Quality Implementation

- ◆ Communicate CAS to Fermilab
 - ❖ FRA, Fermilab senior management, and AC meetings - On-going.
 - ❖ Training plan Fermilab
 - FRA – One person trained
 - FSO – Complete
 - Lab-wide Awareness – Need to define SOW and create materials

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◆ Benchmarking

- ❖ Establish Benchmarking Requirements
- ❖ Write Benchmarking Procedure
- ❖ Create Implementation Plan
 - **Late:** not started

◆ Enterprise Risk Management/Graded Approach

- ❖ Determine Graded Approach Methodology
 - **Late:** proposal awaiting review
- ❖ Write Procedure
- ❖ Create Implementation Plan

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OPPS - OQBP Status Update

Contractor Assurance Short Term Upcoming Events

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Contractor Assurance Short Term Upcoming Events

- ◆ FRA CAS Steering Committee Assessment June '11
- ◆ DOE Peer Review of Contractor Assurance Program August '11

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Questions?